VIEW POINT

FLYING TOWARDS A SUSTAINABLE FUTURE: THE AVIATION INDUSTRY'S JOURNEY TO NET-ZERO

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Recently, I stumbled upon a WEF article that made a striking point: if the global aviation sector were a country, it would rank among the top ten nations worldwide in terms of greenhouse gas emissions. The aviation sector has been playing a vital role in global connectivity, but significantly contributes to carbon dioxide (CO2) emissions, accounting for approximately 2.5% of global CO2 emissions.[1] If you think it's a small number, then think again! The aviation industry has seen faster growth than rail, road, or shipping. If left unchecked, its contribution to global emissions could soar to 27% by 2050.[2]

Despite facing substantial upheaval during the pandemic, the travel industry now grapples with sustainability as its foremost challenge during the rebound. In response to this, the airline industry has set ambitious targets. The International Air Transport Association (IATA) has pledged to achieve net-zero carbon emissions by 2050, a commitment shared by numerous airlines and manufacturers.[3] Boeing, for instance, has introduced a tool that assists airlines in planning for net-zero emissions.[4]

A Paradigm Shift in the Mindset

In recent years, we've witnessed a remarkable transformation in the way people perceive the intersection of sustainability and travel. It's become evident that travelers around the world are rethinking their choices and considering the environmental impact of their journeys. Over 180 airlines and 290 airports worldwide have joined a concerted effort to reduce carbon emissions, reflecting a shared commitment within the aviation industry to embrace sustainability.[5]

What's even more compelling is the shift in travelers' attitudes. A growing number, nearly 40% globally, are now willing to pay a modest premium, at least two percent more, for flights that are carbon-neutral.[6] This trend isn't just a fleeting notion; it's substantiated by data from Skyscanner, which reveals that since 2019, a staggering 68 million travelers have consciously chosen flights with lower carbon emissions, even if it meant shelling out a bit extra.[7]

This evolving mindset extends beyond flights alone. According to a survey by The Vacationer, 78% of Americans are now inclined to invest more in eco-friendly and sustainable accommodations and travel experiences.[8] It's a shift in perspective that underscores the growing recognition that sustainable travel is no longer a 'nice-to-have' but a necessity for the future of our planet.

Businesses are not immune to this change. Along with leisure travel, business travellers are seeking sustainable options like low-carbon flights, electric vehicles and eco-friendly hospitality options. Companies are actively looking at ways to differentiate themselves from competitors, and sustainability has emerged as a compelling avenue. As a result, many aviation companies are looking for strategies to align with evolving sustainability goals and regulations. In fact, IDC analysts point out that by 2024, approximately 80% of worldwide manufacturers will integrate environmental sustainability into their product lifecycle management processes and ecosystems, resulting in a 3% boost in sales.[9]

The Flight to Sustainable Measures

In recent years, there has been much discussion about several sustainability measures, some of which include:

Sustainable Aviation Fuels (SAFs): SAFs represent a promising avenue for significantly curbing the aviation industry's carbon footprint. Nonetheless, their current usage remains minimal within the industry, primarily due to high production costs and limited capacity.

Furthermore, according to a report of IRS, the sustainable aviation fuel (SAF) credit applies to certain fuel mixtures that contain SAF sold or used after December 31, 2022, and before January 1, 2025. This new credit was created by the Inflation Reduction Act of 2022 (Public Law 117-169, 136 Stat. 1818).

Operational and Infrastructure Enhancements: Even minor adjustments can yield substantial environmental benefits. Tweaking flight routes, reducing aircraft weight, optimizing flight paths, and upgrading air traffic management collectively contribute to emissions reduction efforts.

Carbon Offsetting: The Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) endeavors to stabilize CO2 emissions at 2020 levels by obliging airlines to offset their emissions. This initiative represents a significant stride toward achieving our net-zero emissions objective.

Technological Innovation: The development of cutting-edge technologies, such as electric or hydrogen-powered aircraft, holds immense potential for emission reduction. However, these innovations are still in their nascent stages and encounter substantial challenges on the path to widespread adoption.

Policy and Regulatory Support: Government policies play a pivotal role in driving decarbonization efforts by offering incentives for SAF utilization and financing research into emerging technologies.

Creating Significant Impact: The Infosys Approach

Sustainable endeavors extend beyond technological solutions and good intentions. Even when suitable technologies are accessible, many organizations face hurdles in fully harnessing their potential. To successfully implement these initiatives, a holistic vision and strategy and collaborative effort, underpinned by fitting technology, are imperative for translating concepts into concrete outcomes. This also means the ability to comprehend the entire CO2 footprint throughout the life cycle of every part that's used in the airplane, and its associated processes, including sourcing, production, stoppages, shipping, recycling, etc.

Infosys offers the flexibility to provide it as ESG-as-a-service or as standalone solutions. Our primary offerings are designed to address distinct sustainability requirements, and they can be utilized individually or in synergy with others. These foundational offerings have a broad applicability across various industries, affecting multiple departments and fostering sustainability practices. With our smart spaces approach, we aim to enhance efficiency and sustainability within built environments. Our decarbonization efforts are focused on reducing greenhouse gas emissions.

As part of this commitment, Infosys has initiated carbon capture, utilization, and storage (CCUS) and direct air capture (DAC). With CCUS, the captured CO2 will be compressed and transported via pipelines to be used for various applications. Meanwhile, DAC involves storing the CO2 in deep geological formations or repurposing it for other applications. The implementation of CCUS and DAC technologies will enable our customers to accelerate decarbonization exponentially.

Infosys also turned carbon neutral in 2020, 30 years ahead of 2050, the timeline set by Paris Agreement. As a continuation, in Sustainable Aviation Fuels credits (SAFc) exchange, the Infosys solution involves establishing a blockchain-based marketplace for SAF certificates. The marketplace will support multiple sustainability standards and enable efficient and transparent issuance, trading, and monitoring of SAF certificates, benefiting buyers, sellers, and regulatory bodies. Also helps with audit and reporting tools to help stakeholders track their SAFc activity.

We also delve into ESG Finance, which empowers better financial decision-making through the utilization of ESG data. Embracing an energy transition, we facilitate the transition to low-carbon energy sources. Additionally, Circular PLM enables optimized production processes and waste reduction. Finally, our ESG-as-a-service offering takes ESG initiatives to the next level through our managed services.

The Way Ahead

Sustainability is no longer a buzzword or a distant goal. It is an immediate necessity. It is the yardstick by which our actions will be measured, and our legacy defined. But let me assure you, this is not just about ticking boxes or meeting regulatory requirements. It is about embracing a new mindset, a new way of conducting business, and ultimately, redefining the very ethos of our industry. .

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